

REMARKS

Claims 1 through 4 and 6 through 8 are pending in this Application. Claim 1 has been amended and claim 5 cancelled. Care has been exercised to avoid the introduction of new matter. Adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure, including original claim 5. Applicant submits that the present Amendment does not generate any new matter issue.

Claims 1 through 8 were rejected under 35 U.S.C. § 102(e) for lack of novelty as evidenced by Sato et al. (“Sato”).

In the statement of the rejection the Examiner asserted that Sato discloses a positive resist composition identically corresponding to that claimed. This rejection is traversed.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention, as those elements are set forth in the claims, such that the claimed invention is placed into the recognized possession of one having ordinary skill in the art. *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1308, (Fed. Cir. 2008); *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358 (Fed. Cir. 2003); *Crown Operations International Ltd. v. Solutia Inc.*, 289 F.3d 1367 (Fed. Cir. 2002); *Candi Tech Ltd. v. Resco Metal & Plastics Corp.*, 264 F.3d 1344 (Fed. Cir. 2001). Further, as a matter of procedural due process of law, the Examiner is required to specifically identify wherein an applied reference is alleged to disclose each and every feature of a claimed invention, particularly when such is not apparent as in the present case. *In re Rijckaert*, 9 F.3d 1531 (Fed. Cir. 1993); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452 (Fed. Cir. 1984). Moreover, there are fundamental differences between the claimed polymer and the

polymer disclosed by Sato that scotches the factual determination that Sato discloses, or even remotely suggests, a polymer identically corresponding to that claimed.

Specifically, the present invention is directed to an acrylic polymer having a specific structure that can be advantageously employed for a radiation-sensitive resin composition. The acrylic polymer comprises a recurring unit (i) represented by formula (1), a recurring unit (ii) represented by formula (2), and an acid-labile group-containing recurring unit (iii) which contains at least one unit selected from a recurring unit represented by formula (3) and formula (4).

It is apparent from the recited formulas that: the recurring unit (i) has a lactone structure in a side chain; the recurring unit (ii) has a polyalicyclic hydrocarbon group that is not an acid-labile group; and the recurring unit (iii) has an acid-labile group. **Applicant stresses that the recurring unit (ii) does not contain any acid-labile group.**

As a result of this strategic structure, the acrylic polymer possesses highly desirable properties as a chemically amplified resist, including high transparency to radiation (e.g., ArF excimer laser), high sensitivity, superior resolution, dry etching tolerance, and good pattern profile.

In stating the rejection the Examiner asserted that Sato discloses acrylic polymer as defined in claim 1, pointing to polymers (8), (11), (13), (14), and (16). Clearly, none of these polymers contains the recurring unit (ii), as recited in claim 1. Again, Applicant stresses that the recurring unit (ii) has a polyalicyclic hydrocarbon group that is **not an acid-labile group**. Recurring unit (ii) does not have any acid-labile group as apparent from formulas (2a)-(2l).

The above argued significant structural differences between the claimed polymer and the polymer disclosed by Sato undermine the factual determination that Sato discloses a polymer identically corresponding to that claimed. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559 (Fed. Cir. 1992); *Kloster Speedsteel AB v. Crucible*

Inc., 793 F.2d 1565 (Fed. Cir. 1986). Applicant, therefore, submits that the imposed rejection of claims 1 through 8 under 35 U.S.C. § 102(e) for lack of novelty as evidenced by Sato is not factually viable and, hence, solicits withdrawal thereof.

Claims 1 through 8 were rejected under 35 U.S.C. § 103(a) for obviousness predicated upon Nishi et al. (“Nishi”).

In the statement of the rejection the Examiner concluded that one having ordinary skill in the art would have been motivated to modify Nishi’s polymer by adding a further recurring unit of formula (L4), motivated by a reasonable expectation of achieving results obtained by Nishi. This rejection is traversed.

The Examiner is apparently relying upon Polymer No. 6 of Nishi. However, it is quite apparent that Nishi’s Polymer No. 6 **lacks the recurring unit (ii), as recited in claim 1**. See, for example, formulas (2a)-(2l) recited in claim 1. Applicant again notes that each of the recurring units (i), (ii), and (iii) recited in the claimed invention are necessary constituents for the claimed polymer to achieve the advantageous properties required of a chemically amplified resist. The claimed polymers are far superior to Nishi’s polymers in resolution and in other respects.

It is not apparent why one having ordinary skill in the art would have been led to dramatically modify Nishi’s Polymer No. 6 to arrive at the claimed invention. As maintained by the Supreme Court of the United States in *KSR Intern. Co. v. Teleflex Inc.*, 127 S.Ct. 1727 at 1741, an obviousness “analysis should be made explicit.” See, *In re Kahn*, 441 F.3d 977, 988 (C.A. Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to

support the legal conclusions of obviousness”)). No such articulated reasoning has been made of record.

Applicant, therefore, submits that the imposed rejection of claims 1 through 8 under 35 U.S.C. § 103(a) for obviousness predicated upon Nishi is not factually or legally viable and, hence, solicits withdrawal thereof.

Based upon the foregoing, it is apparent that the imposed rejections have been overcome, and that all pending claims are in condition for allowance. Favorable consideration is therefore solicited. If any unresolved issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at 703-519-9954 so that such issues may be resolved as expeditiously as possible.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 504213 and please credit any excess fees to such deposit account.

Respectfully Submitted,

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